Written Testimony of

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Before the

Subcommittee on Finance and Hazardous Materials of the Commerce Committee

The Honorable Michael G. Oxley

Chairman

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There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things.

—Niccolò Machiavelli, 1532

Introduction

Mr. Chairman and Members of the Subcommittee:

I appreciate being invited back before this House Subcommittee—renamed since I was first here—but still responsible for oversight of the U.S. securities markets.

The proposed legislation—*The Common Cents Stock Pricing Act of 1997*—is very important. It is not, as some may believe from its title and brevity, merely a minor modification to established trading procedures. What it will do, when implemented, is change the financial market structure for trading equities in the Nation—and it will do so for the better. Markets will be better because decimalization will finally create genuine price competition for securities. And real competition subsumes an entirely different—and improved—trading system than we have today.

Mr. Chairman, you and your cosponsors are to be commended for setting forth such a significant proposal. I am hard pressed to believe that any member of the Congress—in this House or in the Other Body—after examining this issue carefully and hearing all sides of the argument, will be able to look their constituents in the eye and state that they oppose maximizing price competition for securities, which your legislation will accomplish. True price competition will save American investors billions of dollars annually—dollars that can then be used for such usefully social purposes as helping to pay for their children's college education, or for their own retirement.

The first time I testified—in 1971, more than a quarter-century ago—much of the focus was on fixing the operations of the securities industry, the so-called "back office." Operations was the expense side of Wall Street; it was far easier to achieve agreement among the various economic interests in the financial world than it had been to do so on the income side of the ledger.

As a result, it was not long after the passage of the 1975 Securities Acts Amendments that Wall Street put its operational house in order. The Depository Trust Company, the National Securities Clearing Corporation, of which I was a founding director, the mandating of the CUSIP numbering system, and other related actions healed the operational framework of a very dysfunctional industry. There has been very little problem since the early 1980s with the way securities trades are handled ***after*** the trade is made. It is not too difficult to obtain a consensus when the objective is to save money in operations.

However, the same cannot be said of the "front end" of the industry. When it comes to modifying the way income is derived, the self-interest is overwhelming, regardless of the merits of the arguments. The 1975 session of Congress, led in the House by John Moss, crafted a new Section 11A of the Securities Exchange Act which laid out in general terms the characteristics for a modern, technologically superior trading system which would lead the United States into the new millennium.

As it should have, the legislation ordered the Securities & Exchange Commission ("SEC") to "facilitate" the development of a national market system for securities trading. While the first definition of "facilitate" is to "make easy," the fact that we are here today still attempting to remove obsolete and anticompetitive rules for trading more than two decades later, presents indisputable evidence that the task assigned to the Commission was not easily facilitated. Unfortunately, the approach taken—to focus competition on ***where*** trading should take place, rather than at the ***prices*** at which securities should trade—made the job not only difficult, but truly impossible.

To quote the immortal Yogi Berra, I have a feeling of "*déjà vu* all over again" today as we discuss some of the same key issues that were debated more than a score of years ago: decimalization, fragmentation, internalization, preferencing, payment for order flow, a consolidated book for orders and quotations, price-time priority and removal of anticompetitive rules of self-regulatory organizations.

Perhaps this time these thorny issues can be finally resolved once and for all—and this time in favor of investors and issuers, rather than skewed toward the financial self-interest of intermediaries.

The good news is that now, in 1997—less than three years before the start of a new millennium—the House Subcommittee on Finance and Hazardous Materials has once again opened the legislative door to providing an opportunity for the United States to have the finest, fairest and most competitive securities markets in the world. Mr. Chairman and members of the Subcommittee, I congratulate you and wish you all the very best as you perform your important oversight duties.

Background

The functions of a secondary trading market in securities are straightforward: (a) To maximize and simplify the search for counterparties; and (b) in doing so to discover the best possible prices for both buyers and sellers.

As a part of their mandate, the SEC was asked to "link" exchange markets and "markets other than exchange markets." However, with the very best of intentions, the Commission made the mistake of allowing the market center operators—listed and over-the-counter—to design a system that fragmented the market and created unnecessary and duplicative competition for order flow at the "wholesale" level, rather than enabling investors and professional traders to compete directly for the best execution prices. After all, if someone asks what the market for a particular security is at the moment, the answer is never something like, "New York Stock Exchange bid, offered at Instinet." Instead, prices are called out, for example, "42 bid, offered at 42 1/8." The important part of competition for investors is ***price***, not ***location***. The buyer wants to pay the least; the seller wants to receive the most. All else is irrelevant.

The unfortunate result of the insistence on location competition was the inevitable creation of a Byzantine conglomeration of cobbled-together trading systems—stock exchanges, over-the-counter telephone networks, electronic order entry and execution systems, and the set of facilities required to provide information about what was occurring on all of them. The aggregation used a set of old-fashioned technologies disguised as modern to build a system which resemble more closely one of the late Rube Goldberg's clever, but useless cartoon mechanisms, than it did the "national market system" desired by the Congress. For example, last year the Commission required more than 216 pages of obtuse legalese in an effort to explain how "price improvement" could be attained in their Order Execution Obligations Release.

It is not surprising that those who had profited for decades on market inefficiencies wanted to make certain that the newer systems required the intervention of intermediaries at almost every step of the way. I often ask the rhetorical question: *If bank tellers controlled banks, how many automated teller machines ("ATMs") would there be today?* Brokers, dealers and market center operators controlled—and still control—the mechanisms of securities trading, and were not about to let computers and telecommunications disintermediate them if they could help it.

The correct solution would have been simple and short: specify that best bid, first entered, would always be able to meet best offer, first entered, at each price. And if the Congress ordered the Commission to remove rules which allowed anticompetitive, excessively large minimum price increments, and to separate self-regulation from market center operation, our Nation would finally have the framework needed to create the national market system the Congress ordered 22 years ago this month. Sadly, the idea of centralizing and consolidating all order flow with dealer quotations, while it was placed on the table shortly after the national market system legislation, was quickly lost in a blizzard of rhetoric, lobbying and—in my personal judgment—downright misrepresentations by those who had the most to gain from preserving the *status quo*.

The proposed legislation before this Subcommittee would mandate that the Securities Exchange Act be amended to *"...require quotations in dollars and cents for transactions in equity securities..."* I agree with the objectives of the Bill, but suggest it might be preferable to amend the law to require the Commission to *"...oversee the removal of all anticompetitive rules made by self-regulatory organizations not necessary to accomplish the purposes and objectives of the [Securities Exchange] Act."* The Bill might then provide guidance to the Commission by enumerating examples of rules determined to be anticompetitive by the Congress, including the New York Stock Exchange's Rule 62 (Variations), which demands minimum price increments of one-eighth of a dollar (12½ cents) per share for all listed stocks trading above $1/share; NYSE Rule 390 (Market Responsibility), which prohibits NYSE members from trading as principal a large number of listed securities over-the-counter under a variety of circumstances;

and NYSE Rule 500 (Removal From the List Upon the Request of the Issuer), which makes it operationally impossible for the issuer of any NYSE-listed security to delist voluntarily.

These requirements would not mandate any particular actions, but would instead allow the forces of open competition determine economic outcomes. For example, such an approach would not mandate a reduction of the minimum price variation to one cent (although that will most probably be the result). Instead, it would permit the forces of competition to determine the appropriate minimum price variation for each security separately. One actively-traded stock might usually have a spread of four cents per share, while others might well have spreads of 12 to 25 cents, or even greater. Some have warned that a lowering of the minimum price differential to one cent would *require* that this be the usual spread. That kind of statement is a canard, designed to deter people from supporting your Bill.

Arguments *Against* Decimalization

1. A change to decimals will reduce or even dry up market liquidity.

This is what I have called for years the "Chicken Little" argument. It is the same threat made in the early 1970s against the unfixing of commissions: *If you make this change, the markets will suffer and dry up!* To use Sir Winston Churchill's brilliant retort, commenting on Hitler's promise to wring Britain's neck like a chicken: "Some chicken! Some neck!" Liquidity and volumes in the market have increased dramatically since 1975, when a "big" day on the NYSE was well under 10 million shares.

The "decimalization will cause the death of liquidity" argument is specious. If spreads narrow to smaller increments than are presently allowed *without* dealer involvement, it will be clear that the natural providers of *market* liquidity—investors—are able to furnish sufficient liquidity. If spreads remain approximately the same, the dealers who are now making markets will presumably continue to do so. And if there is a concerted effort to demonstrate that dealers will boycott market making in a decimal environment, past experience has shown that the profit motive will almost instantly break a cartel. And if that should not be enough, there is always the Antitrust Division of the Department of Justice waiting in the wings.

The argument that smaller price increments will lead to smaller amounts quoted *at the narrower spreads* is logical and accurate. However, what is important is the overall size of trades that can be made or *at or within* the former minimum mandated spread. For example, if the size of a market at a one-eighth of a dollar spread is 10,000 shares on either side, the important issue is the total amount of stock that could be traded at a 12½ cent spread *or less* after decimalization, not how just much stock could be traded at a spread of five cents (if that were the inside spread after decimalization).

Also, the claims about the amount of liquidity furnished to markets by market makers, and the potential loss of this liquidity are misleading. The liquidity furnished by market makers when they buy an unwanted position from an investor is *microliquidity*, not market liquidity. The only market participant who has received liquidity from the trade—more properly called *immediacy*—is the seller of the unwanted position. The seller's unwanted position is still an unwanted position. It is still for sale—but now by the market maker instead of the investor. And the market maker—like a used car dealer—who owns the unwanted position is most probably a more eager seller than its former owner, for market makers earn returns based on how fast they can turn over their inventory—again, just like used car dealers.

Market liquidity is provided only by other investors, willing to take on as new investments the positions sold by others. Let me be clear, however: Market makers are, of course, very important and essential participants in financial markets. They provide much of the "lubrication" needed to create efficient markets. But there is a big difference between being the needed "light coat of oil" and the "heavy layer of grease" which they all too often have become with today's market structure.

2. <u>Market externalities will favor intermediaries if price variations become too small.</u>

Some academics argue that, just as Sotheby's creates its own minimum price differentials for their auctions, so should exchanges be able to limit theirs. There are two very major differences between auctioning antiques and trading stocks: First, there are no antitrust protections against policies made by auction houses. Second, stocks are supposed to trade in a national market system in which investors are supposed to receive the very best possible prices. And if those who set the minimum spreads do so in an anticompetitive manner, the public loses unnecessarily.

Their argument goes on to state that some form of governmental intervention in terms of "tick" size is required to keep the market "fair" for investors. But government intervention is not needed to determine the "tick" size when a can of soda is sold. Why should such intervention be needed in the financial markets? Other nations do not deem such regulation necessary; why should the United States do so?

One well-known finance academic finance, my friend Lawrence Harris of the University of Southern California, recently wrote in an OpEd piece for *USA Today* (March 17, 1997), "*Decimalization most benefits market insiders*." He goes on to say, "*They* [market insiders] *can see what you are doing, and they can react to price changes faster than you can.*" This seems a strange argument to make when market makers have been lobbying the SEC mightily for the past few years to change NASDAQ's Small Order Execution system ("SOES") because they complain that individual investors using that system are able to react more quickly to price changes than market makers, thus costing market makers some of their profits. It is also important to remember the language of the 1975 Securities Acts Amendments. Section 11A of the Securities Exchange Act states clearly the congressional objective that:

> *"It is in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to assure*--
>
> > *(iii) the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities..."*

There is nothing in this language to suggest that market information should be delivered to market professionals before being made available to investors. A properly designed market would make *all* market data—bid and offer prices with aggregate amounts at each price displayed (anonymously)—available in real time. A system with these capabilities is feasible; and would cost far less to implement and operate than the present mélange.

3. <u>It will cost too much to make the conversion from fractions to decimals.</u>

It is hard to believe that Wall Street's systems designers would not be ready today for a change to decimals. Not only did the SEC's Division of Market Regulation tell the industry more than three years ago that decimalization appeared preferable and inevitable in their *Market 2000* report, but this Subcommittee asked the NYSE several years ago to report on the timetable and costs of decimalizing.

As a matter of interest, when I was in charge of operations and data processing at Shields & Company Incorporated, we upgraded our systems to prepare for the possibility of decimal pricing in 1968, along with making Wall Street's first conversion to the CUSIP system for securities numbering, implemented the same year. It did not take a clairvoyant even then to discern that computers and telecommunications technology would make trading in dollars and cents instead of fractions the direction of the future.

In addition, the New York Stock Exchange has reported expending far more than $1 billion during the past several years in upgrading their automation. They have a majority ownership in the Securities Industry Automation Corporation ("SIAC"), which implements NYSE automation policies, and operates the Consolidated Quotations and Consolidated Tape systems for the industry under the supervision of the Commission. SIAC was asked a number of years ago to estimate the costs and timing of conversion to decimals. The resultant study should have been completed long ago.

Finally, conversion costs are one-time costs. Savings to investors will be perpetual, and will annually dwarf total conversion estimates. With annual trading volume in the U.S. equity markets exceeding 300 billion shares annually, each one cent saved per share on average will benefit investors as much as $3 billion annually. Cost-benefit studies bear this out.

4. The present system has worked for more than two centuries; why change it?

The abacus and slide rule also worked well for centuries; the abacus is still in use today, but not in modern economies. The *"If it ain't broke, don't fix it!"* argument resembles all too closely the Chicken Little argument. The United States is just about the only nation still trading securities in fractions. (I would also note that—despite all the rhetoric from public relations departments—no other nation has copied the model of *any* American floor-based exchange.) Computers have enabled securities to be traded in decimals in a way that physical exchange floors cannot. It is well to remember that the primary tools used by exchange members a trading arena are a pad and pencil. And with a maximum of 10 fingers per member, dealing in hundredths is far more difficult than dealing in eighths. Computers are not that restricted.

There are two sayings worth remembering: *The worst enemy of a good system is a perfect system.* But even more relevant is the second: *The worst enemy of a good system is a better system.* And decimalization will lead to a much better system.

5. <u>Nobody has asked for a change to decimals.</u>

That statement, while partially true several decades ago, is no longer viable. Together with two colleagues, Professor Morris Mendelson, now Professor Emeritus of Finance at the Wharton School of the University of Pennsylvania, and R.T. Williams, Jr., a consultant and expert in trading systems, I made a presentation in 1976 before the National Market Advisory Board, created by the Congress to advise the Commission as to the shape of the proposed national market system. In our proposal *The National Book System: An Electronically-Assisted Auction Market*, we proposed that trading be changed to decimals. Not surprisingly, the same players who now oppose decimalization were against automation then. As a matter of interest, I append the portions of our 1976 submission to the Commission which deal with decimalization.

More recently, the Commission's Division of Market Regulation has opined that decimalization would be a preferable result than fractions. And now there is a groundswell of media and institutional investor support for a change to decimalization. Finally, some farsighted individual investors, such as Jeffrey Ricker, who is also testifying before this Subcommittee, have done their homework and can provide convincing evidence of the benefits of decimalization for investors.

6. <u>A one cent minimum price variation is too trivial.</u>

This argument is a corollary to the one made earlier about externalities. If one cent is too trivial a price change, why did this House Subcommittee, when it was under the chairmanship of Mr. Markey, the Commission and the National Association of Securities Dealers ("NASD"), spend so much time discussing the payments made by dealers in exchange for obtaining large numbers of orders, known as "Payment for Order Flow"? Typical payments are one or two cents per share. If one or two cents per share were worth debating then, certainly one or two cents per share are worth debating now.

7. <u>Let the minimum price differentials continue to be fractional; sixteenths or thirty-seconds is the way to go.</u>

The monetary system of the United States is decimal, not fractional. Consumers do not buy clothes for $39 59/64; they do so for $39.49, $39.99, or any price in between. Just as the Congress has enacted many laws which protect consumers with "truth in lending" and "truth in pricing," so the idea of decimals is in part a "truth in disclosure" law.

In addition, fractions would have to be reduced to sizes smaller than 64ths before reaching the size of a one cent minimum spread. But again, as I have stressed before, what has to be able to display all possible prices is the core unit of the national market system: the price dissemination, execution and reporting facility. If this is done, then competition will enable the proponents of fractions and decimals to fight it out, with the investors being the winners.

The readiness of some market centers to reduce minimum spreads to sixteenths from eighths when faced with the prospects of decimals gives credence to the view that spreads in many securities may be far too wide. I urge the Subcommittee to be wary of acceding to siren songs which call for minimum spreads of, $1/16^{th}$ or, say, five cents. Doing so just moves the anticompetitive yard marker, rather than eliminating it.

8. <u>Decimalization will remove the opportunity for firms to direct their order flow to market centers of their choice.</u>

"Good!" is my rejoinder to that concern. Two practices which have sprung up during the securities industry's 22-year-long wanderings through the trading wilderness—preferencing and internalization—are the direct result of there being little real price competition. Preferencing, which is the practice of a brokerage firm's being able to contract with a particular market center and/or dealer to send multiple investors' orders of certain types to that site for execution at the "best" price, is what led to the questionable practices in NASDAQ which were the subject of such extensive investigations the past few years. While not examined with the same microscope, similar practices exist on stock exchanges as well. "Price matching," which is the result of preferencing, allows firms to receive large amounts of revenues from almost riskless order executions and trading. All these firms have to do is to equal some other dealer's bid or offer, without making independently-derived bids and offers which are superior.

Internalization, the other practice which will disappear with decimalization, may be explained simply as "self-preferencing." An internalized order is one executed as principal—either in the role of market maker in the over-the-counter market or as specialist on an exchange—without exposing it to the entire order and quote universe to see if a better price might be obtained.

Today, an investor's order is available for competition at two levels. The first—and appropriate— competition is the investor/broker-dealer level. For example, Mr. Chairman, you certainly should have the right to send your order to whichever broker-dealer you choose: Merrill Lynch, PaineWebber or even to the Ohio Company! However, once there, your order should not be used as a pawn to be sent to whatever market center or dealer best meets the economic self-interest of the broker-dealer selected. Instead, your order should be delivered to the national market system as the Congress specified in 1975 for execution at the best possible price for you—and *only* for you. Enactment of this Bill will make it impossible for broker-dealers to "sell" investors' orders for their own profit, as is now the norm.

Arguments *for* decimalization

1. Any national market system requiring a minimum price variation larger than the smallest unit of currency is anticompetitive

This single argument should be sufficient. The entire legislative basis for the regulation of America's securities markets is based on fair and open competition. There is no economic theory or political purpose which *requires* there be minimum price differentials of a certain minimum size to meet the objectives of the Securities Exchange Act. The fact that there *are* rules still in existence which have the *imprimatur* of the Securities and Exchange Commission's blessing which are the remaining shadows of the fixed minimum commission rules which were abolished by congressional fiat in 1975, should be motive enough for the Congress to mandate their abolition.

2. Moving to decimals makes "common cents."

Our smallest monetary unit in circulation is one cent. Decimal trading is ubiquitous in world financial markets. We should not be like the proud mother who, while watching a parade in which her son was participating, proclaimed to all within earshot, "*Look: Everybody's out of step but my Johnny!*"

Financial competition is global. Telecommunications and data processing have made the world truly Marshall McLuhan's "global village." If the people who make the political policy for the United States—for whatever reasons—believe we can retain world leadership in financial markets without staying at the cutting edge of policy and technology, they are sorely mistaken. The pace of change brought about by technology—especially telecommunications technology—has accelerated exponentially in the past quarter-century, and is continuing to accelerate at even faster speeds. If we fail to maximize price competition for securities trading we shall surely lose market share to other nations, possibly forever.

We are learning that battles in cyberspace take few, if any prisoners. If you don't believe me, ask a few competitors of Bill Gates. Markets are becoming virtual; it matters little whether the computers in which they are located are in Washington, D.C., Tasmania, or Bangladesh. Even the impressive *faux* Greco-Roman façade of the New York Stock Exchange will not serve as an impregnable fortress against attacks by superior trading systems *unless protected by political forces*—and even those forces will be transient, since the changes brought about by technology are inexorable.

Mr. Chairman, I would also respectfully suggest to you and the members of the Subcommittee that if our Nation does not keep ahead of our competition around the world, we may lose some or all of our financial market trading systems to foreign-owned enterprises. I would point out that Instinet, a very successful trading system, which I admire, is not owned by an American company. As early as 1978 I cautioned those who would listen that if we did not stay on the cutting edge of technology, this industry—such an important part of our economy—might be lost overseas. I again repeat that caution..

3. Decimalization will save money for investors and issuers.

As mentioned earlier, smaller minimum price increments will lead to narrower spreads, as well as greater trading volumes, leading to greater overall market liquidity. There are billions of dollars which can be saved, both in lower cost of trade execution because of narrower spreads, but also—and probably even more importantly—by the improved systems and lower cost market structure which will inevitably result.

A Decimalized System for the New Millennium

Let me now turn to what would probably happen when the restrictions on minimum price differentials are removed. Since it would be *possible* for spreads to be as small as one cent ($27.06 bid, offered at $27.07, for example), no broker-dealer would be able to enter a customer's order in *any* trading system unless that system were integrated with all other trading systems so "best execution" was assured. The notion of "best execution" is not only embodied in SEC rules, but also in the language of the 1975 legislation. And it hardly seems politically feasible for the Congress to remove that language from any legislation which sets forth a national market system.

Next, as noted before, it is imperative that the centralized facilities which gather the quotes and orders, display them to the investment world, and report transactions—facilities such as the Consolidated Quotations System and the Consolidated Tape—be capable of handling orders, quotes and trade execution data in any denomination: fractional or decimal. If this is accomplished, any market center—whether exchange, over-the-counter or proprietary—would be able to denominate trades the way they wished. If the New York Stock Exchange wanted to maintain a 12½ cent minimum price differential, while some alternative market center went to one cent minimums, they could do so. It seems obvious, however, to note that if investors and dealers could enter bids, offers and orders in finer increments, economic self-interest would lead them to do so. Thus, it would be difficult—if not impossible—for a market center with coarser price increments to stay competitive with those with finer price increments, *unless market centers remain fragmented and without true "best execution" obligations.*.

When I first arrived in Wall Street nearly a half-century ago, each trade was almost custom-made—"bespoke," as the British say. Commissions and spreads were very high. Profits were well above market rates. Since then there has been a relatively high degree of competition, much of the trading has necessarily become commoditized. The 100 to 1,000-share order—formerly handled personally and carefully by brokers on an exchange floor or at the over-the-counter desk—is now a routine computer message, handled by people such as specialists only as a token to maintain a rationale for their function..

As a result of this commoditization, the organizational and operational structures of securities firms have changed. However, the present market structures still require intervention at almost every step of the trade by intermediaries. When true decimalization arrives, and successful price competition becomes essential to a firm's survival, the required increased use of electronics for the trading process to reduce costs will revolutionize market structure. It is entirely possible—if not almost inevitable—that floor trading of equities will vanish in the United States, just as it did in the United Kingdom after their "Big Bang" in 1986. Floor trading will vanish because it will have become too expensive, and franchised dealers—specialists—will be unable to be price-competitive with other types of market makers within automated systems.

In addition, a large percentage of the present-day armies of traders and clerks at over-the-counter trading desks be downsized by computer systems using artificial intelligence and trading decision algorithms which are cousins to the chess playing programs of Deep Blue and its successor cyber engines.

The combination of the new trading methodologies which will be needed when decimalization is implemented, coupled with an integrated centralized system for dissemination of prices, executions and reports, should reduce the overall cost of American market systems by as much as one order of magnitude. The beneficiaries of these savings will be investors and issuers, and our Nation will be able to remain at the forefront of the world's trading systems.

Conclusion

Decimalization is an idea whose time not only has come; it is overdue. Once again, I commend the sponsors of this legislation, and pray that it—like the Securities Reform Act of 1975—will become a bipartisan "slam dunk" in this day of otherwise contentious legislation. American—and global investors—deserve no less.

I also append my 1993 article on the need for decimalization—*Brother, Can you Spare a Dime? Let's Decimalize the U.S. Equity Markets!*—which is reprinted as a chapter in *Global Equity Markets: Technological, Competitive and Regulatory Challenges*, edited by Professor Robert A. Schwartz.

I also append a copy of this week's *Denver Business Journal* article, "*Markets should aid investors who think in dollars and cents,*" which I authored, and respectfully request that they be included as a part of my written testimony, together with the excerpts from our 1976 submission to the National Market Advisory Committee of the SEC.

Mr. Chairman and members of the Subcommittee, thank you for inviting me once again. America's investors eagerly await your deliberations. I welcome your questions.

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Attachments (3)
04/07/97 7:00 AM

(Excerpt)

The National Book System

A proposal delivered to the
National Market Advisory Board of the
Securities & Exchange Commission
April 30, 1976
by

Junius W. Peake
Morris Mendelson
R.T. Williams, Jr.

SECTION I

B. Criteria

1. The system should have the ability to become, in a central arena, a single national market for all eligible securities.[1]

2 The system should be accessible to all broker/dealers, either directly, if qualified[2] by objective criteria, or indirectly, through any qualified broker/dealer.

3. The system should present equal trading information to all users, including broker/dealers, market makers and the general public.

4. The system should be able to process all sizes of orders, including so-called "odd lots" and blocks.

5. The system should provide for equitable sequencing, or "queuing", based on price and time of entry, as well as public priority.

6. The system should provide for the execution of public orders without the necessity of dealer intervention.

7. The system should insure that all executions of orders are, by their processing, "best execution."[3]

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1 "Eligible security" is a publicly-traded security which meets capitalization, financial and trading criteria.

2 A "qualified" broker/dealer is one which is a member of the national clearing, depository and settlement system and has met objective criteria of operational, financial and professional fitness.

3 This statement is not intended to mean that a broker/dealer may sell a security by hitting all bids without consideration of statistical and historical information, nor relieve him of his fiduciary duties and responsibilities.

8. The system should have the fewest rules possible imposed on its operation, consistent with the public interest, as well as technical and policy considerations.

9. The system should, as a by-product of its operations, drive the national on-line transaction reporting system and provide compared ("locked in") data for the national clearing, settlement and depository system.

10. The system should display, in summarized form, all bids and offers at each price. This will narrow spreads and make the market tighter.

11. The system should take advantage of proven technology to reduce expense to the public and provide prompt and accurate data to the investing community.

Section F. Operation of the National Book System

1. Agency orders

A broker in a branch office of Smith & Co., a qualified broker/dealer in the system, would interrogate an inquiry device near his desk for a particular security, just as he does today. However, instead of only a bid/asked and last sale, he would be able to view the market in a security by seeing the "book" of bids and offers, summarized at each price. (Bids would be presented from highest to lowest, while offers would be presented vice-versa.) In addition, statistical and historical information about the security would also be available, including volume and average spread statistics, as well as such information as earnings and margin eligibility. As the market changed, updated information would appear.

Let us assume the market is 42.15 bid for 305 shares with 271 offered at 42.27. The broker receives an order for 175 shares "at the market". Depending on the firm's internal policy, he may enter the order directly into the system, or deliver it to a central order room within his office. In either event, the broker, or his firm's computer, would probably test the market by interposing his customer's bid between the bid and offer. He chooses to bid 42.23 for 175 shares, and the market is instantly updated, becoming 42.23 bid for 175 shares, 273 offered at 42.27.

Another broker, seeing the new bid, and holding an order to sell 100 shares, determines that the spread is reasonable, and enters his order to sell 100 shares at 42.23. This order triggers an execution. A report of the trade is sent by the system to buyer and seller, and a "locked-in" trade report is delivered to a computer file for retransmittal to the national clearing and settlement system. Simultaneously, an execution message is sent to the national trade reporting system, which will print the transaction on a tape, as well as update volume and last sale statistics for any interrogation purposes.

Concurrently, the market as displayed will change to 75 shares bid for at 42.23 and 273 shares offered at 42.27. The buying broker, having received a better price for 100 shares, may elect to raise his bid to 42.27 for the remaining 75 share order. The resultant execution will trigger the same type of process as before, and the displayed market will now be 42.15 bid for 305 shares, 198 offered at 42.27.

Note that the system provides an iterative, or "face to face" type of bargaining. Extraneous information, present in today's system, is eliminated. This includes the identity of the broker in order to effect a trade. The system operator and regulator, of course, may have access to this data, if required. The data is contained in the system, but displayed only to those authorized, and when needed.

Block orders may be negotiated by a market maker or block trader, and then executed through the system, clearing the book in the process.

APPENDIX E
BASIC UNIT OF PRICING

It is always well to remember the circumstances under which a particular system has developed. The present practice of trading securities in fractional units arose because two brokers kept trying to "split the difference." When spreads of whole dollars became too large, "at a half" became the cry. This process continued until eighths were reached.

While some securities, notably low priced ones, trade at sixteenths, only U.S. Governments and similar securities trade at smaller fractions (U.S. Governments trade at fractions as small as 1/128). Over the decades, attempts have been made by many to encourage decimal unit trading. Brokers resisted, because of possible confusion of prices in a face to face crowd environment. Quotations in tenths, rather than eighths, could cause mistakes and losses through errors. Thus the custom of trading in fractions has continued to the present.

Under the National Book System, such restrictions disappear. The computer is an ideal tool to aid the decision makers by serving as a "bookkeeper" to keep inventories, average costs, as well as markets displayed in any form. Narrower spreads are immediately possible if trading is conducted in minimum differentials as one cent.

In addition the National Book System has the advantage of making possible a central market with a minimum number of rules. The basic price and time priority rules will themselves achieve the objective of "394" type rules. If pricing changes to cents, no broker can have achieved "best execution" unless he has attempted to execute his trade between the bid and offer as long as the spread is greater than the minimum unit of pricing. In addition, even when the spread is one unit, the broker cannot claim to have honored the time priority rule unless the order is executed through the system.

Summary of Testimony of Junius W. Peake
April 10, 1997

After the 1975 legislation, the Commission made the mistake of allowing the market center operators to design a fragmented market system, and created unnecessary and duplicative competition for order flow at the "wholesale" level, rather than enabling investors and professional traders to compete directly for the best execution prices. After all, the buyer wants to pay the least; the seller wants to receive the most. All else is irrelevant.

It is not surprising that those who had profited for decades on market inefficiencies wanted to make certain that the newer systems required the intervention of intermediaries at almost every step of the way.

The correct solution is simple and short: specify that best bid, first entered, would always be able to meet best offer, first entered, at each price.

Arguments against decimalization rebutted:

1. <u>A change to decimals will reduce or even dry up market liquidity.</u>

This is what call the "Chicken Little" argument. It is the same threat made in the early 1970s against the unfixing of commissions: *If you make this change, the markets will suffer and dry up!* Liquidity and volumes in the market have increased dramatically since 1975, when a "big" day on the NYSE was well under 10 million shares.

Market liquidity is provided only by other investors, willing to take on as new investments the positions sold by others. Let me be clear, however: Market makers are, of course, very important and essential participants in financial markets. They provide much of the "lubrication" needed to create efficient markets. But there is a big difference between being the needed "light coat of oil" and the "heavy layer of grease" which they all too often have become with today's market structure.

2. <u>Market externalities argue against decimalization</u>

Some argue that exchanges be able to limit price increments across the national market system. They are wrong. A properly designed market would make *all* market data—bid and offer prices with aggregate amounts at each price displayed (anonymously)—available in real time.

3. <u>It will cost too much to make the conversion from fractions to decimals.</u>

It is hard to believe that Wall Street's systems designers would not be ready today for a change to decimals. And conversion costs are one-time costs. Savings to investors will be perpetual, and will annually dwarf total conversion estimates. With annual trading volume in the U.S. equity markets exceeding 300 billion shares annually, each one cent saved per share on average will benefit investors as much as $3 billion annually. Cost-benefit studies bear this out.

4. <u>The present system has worked for more than two centuries; why change it?</u>

The United States is just about the only nation still trading securities in fractions. (I would also note that—despite all the rhetoric from public relations departments—no other nation has copied the model of *any* American floor-based exchange.)

5. <u>A one cent minimum price variation is too trivial.</u>

If one cent is too trivial a price change, why did this House Subcommittee, the Commission and the National Association of Securities Dealers ("NASD"), spend so much time discussing the payments made by dealers in exchange for obtaining large numbers of orders, known as "Payment for Order Flow"?. If one or two cents per share were worth debating then, certainly one or two cents per share are worth debating now.

6. <u>Let the minimum price differentials continue to be fractional.</u>

The national market system must be able to handle all price increments. If this is done, then competition will enable the proponents of fractions and decimals to fight it out, with the investors being the winners.

<u>Arguments *for* decimalization</u>

1. <u>Any system requiring a minimum price variation is anticompetitive</u>

This single argument should be sufficient. In addition, investors will save billions annually.

<u>Conclusion</u>

Decimalization is an idea whose time not only has come; it is overdue. I pray that it—like the Securities Reform Act of 1975—will become a bipartisan "slam dunk" in this day of otherwise contentious legislation. American—and global investors—deserve no less.